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Michael J. Berger
Amster, Rothstein & Ebenstein
90 Park Avenue
New York, NY 10016

EXAMINER	
MEW, KEVIN D	

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2664	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/935,970	ZELIG ET AL.	
	Examiner	Art Unit	
	Kevin Mew	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-14,16-27,29-38 and 40-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-14,16-27,29-38 and 40-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Final Action

Response to Amendment

1. Applicant's Remarks filed on 11/16/2005 regarding claims 1, 12, 14, 25, 27 and 38 have been considered. Claims 1, 3-14, 16-27, 29-38, 40-48 are currently pending and claims 2, 15, 28, 39 have been canceled by applicant.

2. Acknowledgement is made of the amended claims 1, 12, 14, 25, 27 and 38.

Claim Objections

3. Claim 14 is objected to because of the following informalities:

In line 17, claim 14, replace the phrase "both of the first and second nodes is" with "both of the first and second nodes are."

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-4, 6, 8-14, 16-17, 19, 21-27, 29-30, 32, 34-38, 40-41, 43, 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauger et al. (USP 6,886,043) in view of Chuah et al. (USP 6,408,001).

Regarding claim 1, Mauger discloses a method for establishing a labels-switched path, employing a three-layer label stack at the edge of a virtual private network, between at least first and second users (**a method to achieve end-to-end connection with guaranteed quality of service between two end stations of a network**, see col. 1, lines 60-67, col. 2, lines 55-67), the method comprising:

responsive to a request to initiate the service connection at the first node (**a label-switched path LSP is established by using the label request message from a local label switched router LSR**, see col. 6, lines 1-49), generating a local index at the first node indicative of the service to be provided (**generating a third level label which relates to one of a number of sessions which can be dynamically multiplexed onto the same LSP**, see col. 6, lines 1-49);

sending a first signaling message (**connection control information is tunneled between media gateway controllers**) containing the index from the first node and service parameters of both of the first and second nodes via the network to the second node (**containing the third level label and ingress logical port**, see col. 6, lines 1-49 and col. 8, lines 1-28 and Fig. 1);

upon receiving the message at the second node (**the terminating gateway controller receives the session request**, see col. 8, lines 1-28), initiating the service connection at the second node responsive to the index and the service parameters (**the terminating gateway controller issues an H.248 command to connect this path to the logical port**, see col. 8, lines 1-28; note that ingress logical port, three-layer label stack and bearer package are interpreted as service parameters), and sending a second signaling message via the network to the first node (H.248 command, see col. 8, lines 1-28); and

upon receiving the second signaling message at the first node, activating the service indicated by the index (**the H.248 command is received at the originating gateway controller and is used to connect the media gateway to the far-end terminal this establishing the end-to-end session**, see col. 8, lines 1-28).

Mauger does not explicitly show a bi-directional data link layer service to be provided between at least first and second users connected to at least first and second respective data link layer ports of first and second nodes.

However, Chuah discloses a bi-directional label switching router that is capable of performing layer two switching at the data link layer (col. 1, lines 45-67, col. 5, lines 1-28, col. 6, lines 27-42), wherein the source port and the destination port (**first and second respective data link layer ports of first and second nodes**) are being used as the service parameters in the stream member description field of the advertising class message during label distribution between a first node and a second node (col. 5, lines 29-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the label switching method of Mauger with the teaching of Chuah

such that the label-switching method and system of Mauger will employ a bi-directional data link layer service to connect first node and second node at the respective data link ports via sending a signaling message comprising the source and destination ports as service parameters, such as the one taught by Chuah.

The motivation to do so is to allow layer two data link switching to be employed for the label switching method of Mauger because layer two switching significantly increases the forwarding speed when compared to layer three forwarding since the microprocessor is relieved of the tasks of parsing each packet's IP header, calculating the next hop address, and forwarding the packet.

Regarding claim 3, Mauger discloses a method according to claim 1, wherein the service parameters are indicative of the data link port on the first node (**ingress logical port**) on which the service is to be provided (see col. 8, lines 1-28).

Regarding claim 4, Mauger discloses a method according to claim 1, wherein the service parameters are indicative of the data link port on the second node on which the service is to be provided (**the IP address contained in the bearer package is indicative of the terminating media gateway**, see col. 8, lines 1-28).

Regarding claim 6, Mauger discloses a method according to claim 1, wherein the service comprises a transparent LAN service (TLSI) (**virtual private network VPN**, see col. 7, lines 7-34), and wherein the index is indicative of a TLS instance on which service to be

provided (**a particular VPN network identified by the three-layer label stacks of the LSP**, see col. 7, lines 7-34).

Regarding claim 8, Mauger discloses a method according to claim 1, wherein the service parameters further contain a field identifying a service type of the request service (**a TLV field identifying the traffic contract parameters**, see col. 6, lines 32-49).

Regarding claim 9, Mauger discloses a method according to claim 1, wherein the service parameters are configured to form a part of a Management Information Base maintained at the nodes (**the ingress logical port and the bearer package are maintained as information base to manage LSP**, see col. 8, lines 1-28).

Regarding claim 10, Mauger discloses a method according to claim 1, wherein sending the first signaling message comprises sending a signaling packet in which the service parameters are encapsulated in an object (**bearer information are encapsulated in a bearer package**, see col. 8, lines 1-28) that is ignored (**without any control function processed in the intermediate nodes**) and passed on packet-switching routers along route of the packet (**passed along the LSP of the label switched routers LSR**), and is received and read only the second node (**a third level of label is employed in conjunction with a CR-LSP to minimize the control of the network to the two edges of the network**, see col. 2, lines 55-67 and col. 3, lines 14-25).

Regarding claim 11, Mauger discloses a method according to claim 10, wherein sending the signaling packet comprises sending a resource reservation packet (RSVP, see col. 7, lines 34-55) in which the object has a class number (third level of label) that causes the routers to ignore it (that causes implicit switching to occur and to minimize the control of the network to the two edges of the network with having the need for an intermediate node to process any control function, see col. 2, lines 55-67, col. 3, lines 6-26).

Regarding claim 12, Mauger discloses a method for establishing a data link service connection for a service to be provided between first and second nodes label-switched tunnel through a network (**a method to achieve end-to-end connection with guaranteed quality of service between two end stations of a network**, see col. 1, lines 60-67, col. 2, lines 55-67), the method comprising:

responsive to a request to initiate the service connection at the first node (**a label-switched path LSP is established by using the label request message from a local label switched router LSR**, see col. 6, lines 1-49), generating a local index (a label) at the first node indicative of the service to be provided (**generating a third level label which relates to one of a number of sessions which can be dynamically multiplexed onto the same LSP**, see col. 6, lines 1-49);

sending a signaling packet from first node the network to the second node (**connection control information is tunneled between media gateway controllers**, see col. 6, lines 1-49 and col. 8, lines 1-28 and Fig. 1), with the index encapsulated in the signaling packet in an object (**bearer information are encapsulated in a bearer package**, see col. 8, lines 1-28) that is

ignored (**without any control function processed in the intermediate nodes**) and passed on packet-switching routers along route of the packet (**passed along the LSP of the label switched routers LSR**), and is received and read only at the second node (**a third level of label is employed in conjunction with a CR-LSP to minimize the control of the network to the two edges of the network**, see col. 2, lines 55-67 and col. 3, lines 14-25); and

initiating the service connection at the second node responsive to the index received the signaling packet (**the H.248 command is received at the originating gateway controller and is used to connect the media gateway to the far-end terminal this establishing the end-to-end session**, see col. 8, lines 1-28).

Mauger does not explicitly show the signaling packet in an object comprising at least one bit that is set to a value selected so as to cause the object to be ignored.

However, Chuah discloses encapsulating a two-bit header removal field in the stream member descriptor SMD subtype of an advertising class message (col. 5, lines 29-67) to instruct the receiving label-switched router LSR on how to process the IP headers of labeled IP packets (SMD and labeled IP packet is considered as an object) associated with a particular flow. If the header removal field HR is to "00", then source or destination IP headers are not removed (col. 8, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the label switching method of Mauger with the teaching of Chuah such that the label-switching method and system of Mauger will comprise an signaling packet in an object comprising at least one bit that is set to a value selected so as to cause the object to be ignored.

The motivation to do so is to supply the receiving LSR with information regarding the header structure of packets associated with an aggregated flow such that the LSR will efficiently convey packets with minimal overhead.

Regarding claim 13, Mauger discloses a method according to claim 12, wherein sending the signaling packet comprises sending a resource reservation packet (**RSVP**, see col. 7, lines 34-55) in which the object has a class number (**third level of label**) that causes the routers to ignore it (**that causes implicit switching to occur and to minimize the control of the network to the two edges of the network with having the need for an intermediate node to process any control function**, see col. 2, lines 55-67, col. 3, lines 6-26).

Regarding claim 14, Mauger discloses a communication network (see Fig. 1), comprising:

first and second access nodes (**originating and terminating multimedia gateways**, Fig. 1); and

a plurality intermediate nodes that are configured to operate as packet-switching routers so as to convey data packets between first and second access nodes (**LSR nodes located in between the originating and terminating multimedia gateways**, Fig. 1),

wherein access nodes are configured so that responsive to a request to initiate a labels-switched path, employing a three-layer label stack at the edge of a virtual private network, between at least first and second users (**a label-switched path LSP is established by using the label request message from a local label switched router LSR**, see col. 6, lines 1-49), a local

index is generated at first node indicative of the service to be provided (**generating a third level label which relates to one of a number of sessions which can be dynamically multiplexed onto the same LSP**, see col. 6, lines 1-49), and a first signaling message (**connection control information is tunneled between media gateway controllers**) containing the index and service parameters (**containing the third level label and ingress logical port**, see col. 6, lines 1-49 and col. 8, lines 1-28) of both of the first and second nodes are sent from the first node via the intermediate nodes to the second node (see Fig. 1), and so that upon receiving the first signaling message the second node (**the terminating gateway controller receives the session request**, see col. 8, lines 1-28), the service connection is initiated at the second node responsive the index and the service parameters (**the terminating gateway controller issues an H.248 command to connect this path to the logical port**, see col. 8, lines 1-28; note that ingress logical port, three-layer label stack and bearer package are interpreted as service parameters), and second signaling message sent via the intermediate nodes the first node, and that upon receiving second signaling message the first node, the service indicated by the index activated (**the H.248 command is received at the originating gateway controller and is used to connect the media gateway to the far-end terminal this establishing the end-to-end session**, see col. 8, lines 1-28).

However, Chuah discloses a bi-directional label switching router that is capable of performing layer two switching at the data link layer (col. 1, lines 45-67, col. 5, lines 1-28, col. 6, lines 27-42), wherein the source port and the destination port (**first and second respective data link layer ports of first and second nodes**) are being used as the service parameters in the

stream member description field of the advertising class message during label distribution between a first node and a second node (col. 5, lines 29-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the label switching method of Mauger with the teaching of Chuah such that the label-switching method and system of Mauger will employ a bi-directional data link layer service to connect first node and second node at the respective data link ports via sending a signaling message comprising the source and destination ports as service parameters, such as the one taught by Chuah.

The motivation to do so is to allow layer two data link switching to be employed for the label switching method of Mauger because layer two switching significantly increases the forwarding speed when compared to layer three forwarding since the microprocessor is relieved of the tasks of parsing each packet's IP header, calculating the next hop address, and forwarding the packet.

Regarding claim 15, Mauger discloses a network according to claim 14, wherein the service parameters are indicative of a data link port on which the service is to be provided (**ingress logical port and bear package**, see col. 8, lines 1-28), and wherein activating the service comprises activating the service on the data link port indicated by the service parameters (see col. 8, lines 1-28).

Regarding claim 16, Mauger discloses a network according to claim 14, wherein the service parameters are indicative the data link port on first node (**ingress logical port**) on which the service is to be provided (see col. 8, lines 1-28).

Regarding claim 17, Mauger discloses a network according to claim 14, wherein the service parameters are indicative data link port on the second node on which the service is to be provided (**the IP address contained in the bearer package is indicative of the terminating media gateway**, see col. 8, lines 1-28).

Regarding claim 19, Mauger discloses a network according claim 14, wherein the service comprises a transparent LAN service (TLS) (**virtual private network VPN**, see col. 7, lines 7-34), and wherein the index is indicative of a TLS instance on which service to be provided (**a particular VPN network identified by the three-layer label stacks of the LSP**, see col. 7, lines 7-34).

Regarding claim 21, Mauger discloses a network according claim 14, wherein the service parameters further contain field identifying service type of requested service (**a TLV field identifying the traffic contract parameters**, see col. 6, lines 32-49).

Regarding claim 22, Mauger discloses a network according claim 14, wherein service parameters are configured to form part of Management Information Base maintained at

the nodes (**the ingress logical port and the bearer package are maintained as information base to manage LSP**, see col. 8, lines 1-28).

Regarding claim 23, Mauger discloses a network according to claim 14, wherein the first signaling message the service parameters comprises a signaling packet in which the service parameters are encapsulated in an object (**bearer information are encapsulated in a bearer package**, see col. 8, lines 1-28) that is ignored (**without any control function processed in the intermediate nodes**) and passed on packet-switching routers along route of the packet (**passed along the LSP of the label switched routers LSR**), and is received and read only the second node (**a third level of label is employed in conjunction with a CR-LSP to minimize the control of the network to the two edges of the network**, see col. 2, lines 55-67 and col. 3, lines 14-25).

Regarding claim 24, Mauger discloses a network according claim 23 wherein the signaling packet comprises a resource reservation packet (**RSVP**, see col. 7, lines 34-55) in which the object has a class number (**third level of label**) that causes the routers to ignore it (**that causes implicit switching to occur and to minimize the control of the network to the two edges of the network with having the need for an intermediate node to process any control function**, see col. 2, lines 55-67, col. 3, lines 6-26).

Regarding claim 25, Mauger discloses a communication network (see Fig. 1), comprising:

first and second access nodes (**originating and terminating multimedia gateways**, Fig. 1); and

a plurality of intermediate nodes that are configured operate as label-switched provide label-switched tunnel between first second access nodes (**LSR nodes located in between the originating and terminating multimedia gateways**, Fig. 1),

wherein the access nodes are configured so that responsive to a request to initiate the service connection at the first node (**a label-switched path LSP is established by using the label request message from a local label switched router LSR**, see col. 6, lines 1-49), a local index is generated at the first node indicative of service be provided (**generating a third level label which relates to one of a number of sessions which can be dynamically multiplexed onto the same LSP**, see col. 6, lines 1-49), and a signaling packet is sent from the first node network to the second node (**connection control information is tunneled between media gateway controllers**, see col. 6, lines 1-49 and col. 8, lines 1-28 and Fig. 1), with the index encapsulated in the signaling packet in an object (**bearer information are encapsulated in a bearer package**, see col. 8, lines 1-28) that is ignored (**without any control function processed in the intermediate nodes**) and passed on packet-switching routers along route of the packet (**passed along the LSP of the label switched routers LSR**), and is received and read only the second node (**a third level of label is employed in conjunction with a CR-LSP to minimize the control of the network to the two edges of the network**, see col. 2, lines 55-67 and col. 3, lines 14-25).

Mauger does not explicitly show the signaling packet in an object comprising at least one bit that is set to a value selected so as to cause the object to be ignored.

However, Chuah discloses encapsulating a two-bit header removal field in the stream member descriptor SMD subtype of an advertising class message (col. 5, lines 29-67) to instruct the receiving label-switched router LSR on how to process the IP headers of labeled IP packets (SMD and labeled IP packet is considered as an object) associated with a particular flow. If the header removal field HR is to "00", then source or destination IP headers are not removed (col. 8, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the label switching method of Mauger with the teaching of Chuah such that the label-switching method and system of Mauger will comprise an signaling packet in an object comprising at least one bit that is set to a value selected so as to cause the object to be ignored.

The motivation to do so is to supply the receiving LSR with information regarding the header structure of packets associated with an aggregated flow such that the LSR will efficiently convey packets with minimal overhead.

Regarding claim 26, Mauger discloses a network according claim 25, wherein the signaling packet comprises a resource reservation packet (**RSVP**, see col. 7, lines 34-55) in which the object has a class number (**third level of label**) that causes the routers to ignore it **(that causes implicit switching to occur and to minimize the control of the network to the two edges of the network with having the need for an intermediate node to process any control function**, see col. 2, lines 55-67, col. 3, lines 6-26).

Regarding claim 27, Mauger discloses a method for establishing a labels-switched path, employing a three-layer label stack at the edge of a virtual private network, between at least first and second users (**a method to achieve end-to-end connection with guaranteed quality of service between two end stations of a network**, see col. 1, lines 60-67, col. 2, lines 55-67), the method comprising:

responsive to a request to initiate the service connection at the first node (**a label-switched path LSP is established by using the label request message from a local label switched router LSR**, see col. 6, lines 1-49),

generating a local index at the first node indicative of parameters of the service to be provided (**generating a third level label which relates to one of a number of sessions which can be dynamically multiplexed onto the same LSP**, see col. 6, lines 1-49);

sending a first signaling message (**connection control information is tunneled between media gateway controllers**) containing the index from the first node and service parameters of both of the nodes via the network to the second node (**containing the third level label and ingress logical port**, see col. 6, lines 1-49 and col. 8, lines 1-28 and Fig. 1);

upon receiving the message at the second node (**the terminating gateway controller receives the session request**, see col. 8, lines 1-28), initiating the service connection at the second node responsive to the index (**the terminating gateway controller issues an H.248 command to connect this path to the logical port**, see col. 8, lines 1-28; note that ingress logical port, three-layer label stack and bearer package are interpreted as service parameters), and sending a second signaling message via the network to the first node (**H.248 command**, see col. 8, lines 1-28); and

upon receiving the second signaling message at the first node, activating the service indicated by the index via the first and second label-switched tunnels (**the H.248 command is received at the originating gateway controller and is used to connect the media gateway to the far-end terminal this establishing the end-to-end session**, see col. 8, lines 1-28).

However, Chuah discloses a bi-directional label switching router that is capable of performing layer two switching at the data link layer (col. 1, lines 45-67, col. 5, lines 1-28, col. 6, lines 27-42), wherein the source port and the destination port (**first and second respective data link layer ports of first and second nodes**) are being used as the service parameters in the stream member description field of the advertising class message during label distribution between a first node and a second node (col. 5, lines 29-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the label switching method of Mauger with the teaching of Chuah such that the label-switching method and system of Mauger will employ a bi-directional data link layer service to connect first node and second node at the respective data link ports via sending a signaling message comprising the source and destination ports as service parameters, such as the one taught by Chuah.

The motivation to do so is to allow layer two data link switching to be employed for the label switching method of Mauger because layer two switching significantly increases the forwarding speed when compared to layer three forwarding since the microprocessor is relieved of the tasks of parsing each packet's IP header, calculating the next hop address, and forwarding the packet.

Regarding claim 29, Mauger discloses a method according to claim 27, wherein the index is indicative of the data link port on the first node (**ingress logical port**) on which the service is to be provided (see col. 8, lines 1-28).

Regarding claim 30, Mauger discloses a method according claim 27, wherein the index indicative of the data link port the second node on which the service be provided (**the IP address contained in the bearer package is indicative of the terminating media gateway**, see col. 8, lines 1-28).

Regarding claim 32, Mauger discloses a method according to claim 27, wherein service comprises a transparent LAN service (**virtual private network VPN, see col. 7, lines 7-34), and wherein the index is indicative of a TLS instance on which service to be provided (a particular VPN network identified by the three-layer label stacks of the LSP**, see col. 7, lines 7-34).

Regarding claim 34, Mauger discloses a method according to claim 27, wherein the index further contains a field identifying a service type of the requested service (**a TLV field identifying the traffic contract parameters**, see col. 6, lines 32-49).

Regarding claim 35, Mauger discloses a method according to claim 27, wherein the index is configured form a part of a Management Information Base maintained at the nodes (**the**

ingress logical port and the bearer package are maintained as information base to manage LSP, see col. 8, lines 1-28).

Regarding claim 36, Mauger discloses a method according to claim 27, wherein sending the first signaling message comprises sending a signaling packet in which the index is encapsulated in an object (**bearer information are encapsulated in a bearer package**, see col. 8, lines 1-28) that is ignored (**without any control function processed in the intermediate nodes**) and passed on packet-switching routers along route of the packet (**passed along the LSP of the label switched routers LSR**), and is received and read only the second node (**a third level of label is employed in conjunction with a CR-LSP to minimize the control of the network to the two edges of the network**, see col. 2, lines 55-67 and col. 3, lines 14-25).

Regarding claim 37, Mauger discloses a method according to claim 36, wherein sending the signaling packet comprises sending a resource reservation packet (**RSVP**, see col. 7, lines 34-55) in which the object has a class number (**third level of label**) that causes the routers to ignore it (**that causes implicit switching to occur and to minimize the control of the network to the two edges of the network with having the need for an intermediate node to process any control function**, see col. 2, lines 55-67, col. 3, lines 6-26).

Regarding claim 38, Mauger discloses a communication network (see Fig. 1), comprising:

first and second access nodes (**originating and terminating multimedia gateways**, Fig. 1); and

a plurality intermediate nodes that are configured to operate as packet-switching routers so as to convey data packets between first and second access nodes (**LSR nodes located in between the originating and terminating multimedia gateways**, Fig. 1),

wherein access nodes are configured so that responsive to a request to initiate a request (**a label-switched path LSP is established by using the label request message from a local label switched router LSR**, see col. 6, lines 1-49) for establishing a labels-switched path, employing a three-layer label stack at the edge of a virtual private network, between at least first and second users (**a method to achieve end-to-end connection with guaranteed quality of service between two end stations of a network**, see col. 1, lines 60-67, col. 2, lines 55-67), a local index is generated at first node indicative of the service to be provided (**generating a third level label which relates to one of a number of sessions which can be dynamically multiplexed onto the same LSP**, see col. 6, lines 1-49), wherein the parameters comprise an indication of at least one of the first and second data link layer ports, and a first signaling message (**connection control information is tunneled between media gateway controllers**) containing the index (**containing the third level label and ingress logical port**, see col. 6, lines 1-49 and col. 8, lines 1-28) is sent from the first node via the intermediate nodes to the second node (see Fig. 1), and so that upon receiving the first signaling message the second node (**the terminating gateway controller receives the session request**, see col. 8, lines 1-28), the service is initiated at the second node responsive the index and the service parameters (**the terminating gateway controller issues an H.248 command to connect this path to the logical port**, see col. 8, lines

1-28; note that ingress logical port, three-layer label stack and bearer package are interpreted as service parameters), and second signaling message sent via the intermediate nodes the first node, and that upon receiving second signaling message the first node, the service indicated by the index activated via the first and second label-switched tunnels (**the H.248 command is received at the originating gateway controller and is used to connect the media gateway to the far-end terminal this establishing the end-to-end session**, see col. 8, lines 1-28).

However, Chuah discloses a bi-directional label switching router that is capable of performing layer two switching at the data link layer (col. 1, lines 45-67, col. 5, lines 1-28, col. 6, lines 27-42), wherein the source port and the destination port (**first and second respective data link layer ports of first and second nodes**) are being used as the service parameters in the stream member description field of the advertising class message during label distribution between a first node and a second node (col. 5, lines 29-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the label switching method of Mauger with the teaching of Chuah such that the label-switching method and system of Mauger will employ a bi-directional data link layer service to connect first node and second node at the respective data link ports via sending a signaling message comprising the source and destination ports as service parameters, such as the one taught by Chuah.

The motivation to do so is to allow layer two data link switching to be employed for the label switching method of Mauger because layer two switching significantly increases the forwarding speed when compared to layer three forwarding since the microprocessor is relieved

of the tasks of parsing each packet's IP header, calculating the next hop address, and forwarding the packet.

Regarding claim 39, Mauger discloses a network according to claim 38, wherein index is indicative of a data link port on which the service is to be provided (**ingress logical port and bear package**, see col. 8, lines 1-28), and wherein activating the service comprises activating the service on the data link port indicated by the service parameters (see col. 8, lines 1-28).

Regarding claim 40, Mauger discloses a network according claim 38, wherein the index indicative the data link port the first node (**ingress logical port**) on which the service is to be provided (see col. 8, lines 1-28).

Regarding claim 41, a network according claim 38, wherein index is indicative of the data link port on the second node on which the service to be provided (**the IP address contained in the bearer package is indicative of the terminating media gateway**, see col. 8, lines 1-28).

Regarding claim 43, Mauger discloses a network according to claim 38, wherein service comprises a transparent LAN service (**virtual private network VPN**, see col. 7, lines 7-34), and wherein the index is indicative of a TLS instance on which service to be provided (**a particular VPN network identified by the three-layer label stacks of the LSP**, see col. 7, lines 7-34).

Regarding claim 45, Mauger discloses a network according to claim wherein the index further contains field identifying a service type the requested service (**a TLV field identifying the traffic contract parameters**, see col. 6, lines 32-49).

Regarding claim 46, Mauger discloses a network according claim 38, is configured form a part of a Base maintained at the nodes. wherein the index Management Information (**the ingress logical port and the bearer package are maintained as information base to manage LSP**, see col. 8, lines 1-28).

Regarding claim 47, Mauger discloses a network according claim 38, wherein the first signaling message comprises a signaling packet in which the index is encapsulated in an object (**bearer information are encapsulated in a bearer package**, see col. 8, lines 1-28) that is ignored (**without any control function processed in the intermediate nodes**) and passed on packet-switching routers along route of the packet (**passed along the LSP of the label switched routers LSR**), and is received and read only the second node (**a third level of label is employed in conjunction with a CR-LSP to minimize the control of the network to the two edges of the network**, see col. 2, lines 55-67 and col. 3, lines 14-25).

Regarding claim 48, Mauger discloses a network according to claim 47, wherein the signaling packet comprises sending a resource reservation packet (**RSVP**, see col. 7, lines 34-55) in which the object has a class number (**third level of label**) that causes the routers to ignore it (**that causes implicit switching to occur and to minimize the control of the network**

to the two edges of the network with having the need for an intermediate node to process any control function, see col. 2, lines 55-67, col. 3, lines 6-26).

5. Claims 5, 7, 18, 20, 31, 33, 42, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauger in view of Chuah, and in further view of Kong et al. (US Publication 2002/0176450).

Regarding claims 5, 18, 31, 42, the combined method and system of Mauger and Chuah discloses all the aspects of the claimed invention set forth in the rejection of claims 1, 14, 27, 38 above, except fails to explicitly show a method wherein the service connection comprises an Ethernet connection, and wherein the index is further indicative of a Virtual LAN (VLAN) address to which the service is to be provided. However, Kong discloses a SONET network in which multiprotocol Label Switching MPLS routing information can be used along with VLAN ID and Ethernet MAC frame (see paragraph 0060). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined label-switched communication method and network of Mauger and Chuah with the teaching of Kong in using VLAN ID and Ethernet frame with MPLS routing information such that the service connection to be established is an Ethernet connection and the bearer information comprises VLAN ID. The motivation to do so is to provide the capability to classify Ethernet frames based on MPLS routing information and VLAN ID.

Regarding claims 7, 20, 33, 44, the combined method and system of Mauger and Chuah discloses all the aspects of the claimed invention set forth in the rejection of claims 1, 14, 27, 38 above, except fails to explicitly show a method wherein service comprises a SONET service, and

wherein the service parameters are indicative of a SONET path on which the service is to be provided. However, Kong discloses a SONET network wherein the MPLS can be used along with VLAN ID to classify Ethernet frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined label-switched communication method and network of Mauger with the teaching of Kong in using MPLS to classify Ethernet frames in a SONET path such that a SONET service is provided and indicated by bearer information. The motivation to do so is to allow a SONET path be established in order to create a highly reliable, synchronous, and high-speed network for carrying network traffic.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 12, 14, 25, 27 and 38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Duong can be reached on 571-272-3164. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FRANK DUONG
PRIMARY EXAMINER

Kevin Mew
Work Group 2616